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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/847,127	05/02/2001	Charles Anthony Dafft	A01043	5418

21898 7590 08/30/2002

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EXAMINER

PRICE, CARL D

ART UNIT	PAPER NUMBER
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3743

DATE MAILED: 08/30/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicant(s)

09/847,127

Applicant(s)

DAFFT ET AL.

Examiner

CARL D. PRICE

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 May 2001 (preliminary amendment).
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3,4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

The drawings are objected to because of the reasons set forth on the attached PTO FORM 948. Correction is required.

Figure 1 should be designated by a legend such as **--Prior Art--** because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Prior Art flare system (illustrated in Figure 1 of the present application) in view of Japanese '048.

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The Prior Art flare system of applicant's figure 1 discloses the invention substantially as set forth in the claims with possible exception to the hydrogen being mixed with the dilute waste gas stream (6) for the purpose of bringing about a reduction of the amount of nitrous oxide gas in the flare gases.

Japanese '048 teaches, from the same combustion field of endeavor as the Prior Art flare system, introducing a quantity of hydrogen into a combustion fuel feed supply for the purpose of lowering the amount of nitrogen oxide formed in the exhaust gases. In particular, see table 1 which teaches that the amount of nitrogen oxides produced decreases as the amount of hydrogen mixed with the fuel is increased.

Japanese '469 teaches, from the same combustion field of endeavor as the Prior Art flare system, introducing an amount of carbon monoxide, hydrogen or ammonia into a waste gas stream for the purpose of lowering the amount of nitrogen oxide formed in the exhaust gases. In particular, see page 1 which teaches that water is produced when nitrogen oxides react with hydrogen, and carbon dioxide is produced when nitrogen oxides react with carbon monoxide.

In regard to claims 1-14, for the purpose of converting a gaseous waste material to carbon dioxide and water, it would have been obvious to a person having ordinary skill in the art to direct the hydrogen product gas of the Prior Art flare system to be mixed with the gaseous waste stream prior to entering the flare, or to add carbon monoxide, hydrogen or ammonia separately or in combination to the gaseous waste, in view of the teaching of either Japanese '048 or Japanese '469. In regard to claims 1-14, since the claimed amount of converted waste gas and hydrogen concentration, would depend on numerous design concerns such as the

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chemical composition of the gaseous waste, etc., to form convert 80% of the gaseous waste and/or provide at least 3 mole percent of hydrogen can be viewed as nothing more than a mere matter of choice in design absent the showing of any new or unexpected results produced therefrom over the prior art of record.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

German '999 discloses directing produced hydrogen to a flare.

Seeley et al, Sano, Reed '083 and Reed '671 both disclose feeding a hydrogen compound into a waste stream.

USPTO CONTACT INFORMATION

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CARL D. PRICE whose telephone number is 703-308-1953. The examiner can normally be reached on Monday through Friday between 6:30am-3:00pm.

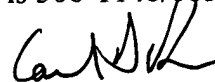
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry Bennett can be reached on 703-308-0101. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9302 for regular communications and 703-872-9303 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-1148/0858.



CARL D. PRICE
Primary Examiner
Art Unit 3743

cp
August 25, 2002